

b1
End

a first area sensor having sensing elements disposed two-dimensionally arranged in the approximate image forming plane of the first optical system for receiving the light of the first object image;

a second optical system for forming a second object image;

a second area sensor having sensing elements disposed two-dimensionally arranged in the approximate image forming plane of the second optical system for receiving the light of the second object image;

a signal reader for reading a first photoreception signal group from said first area sensor, a second photoreception signal group from said second area sensor and a third photoreception signal group from said second area sensor;

a position detector for detecting a first image interval based upon the second photoreception signal group and the first photoreception signal group and for detecting a second image interval based upon the third photoreception signal group and the first photoreception signal group; and

an angle detector for detecting a magnitude of an angle of the second object image relative to an axis of the second area sensor based on the detected image intervals.

7. (Twice Amended) An image sensing device according to claim 6, wherein said angle detector detects the angle of the second object image relative to the axis of the second area sensor by means of data of relative positional relationship of said optical systems and said area sensors.

9. (Twice Amended) A distance measuring device comprising:

B7

- a first optical system for forming a first object image;
- a first area sensor having sensing elements disposed two-dimensionally arranged in the approximate image forming plane of the first optical system for receiving the light of the first object image;
- a second optical system for forming a second object image;
- a second area sensor having sensing elements disposed two-dimensionally arranged in the approximate image forming plane of the second optical system for receiving the light of the second object image;
- a signal reader for reading a first photoreception signal group from said first area sensor, a second photoreception signal group from said second area sensor and a third photoreception signal group from said second area sensor;
- a position detector for detecting a first image interval based upon the second photoreception signal group and the first photoreception signal group and for detecting a second image interval based upon the third photoreception signal group and the first photoreception signal group;
- an angle detector for detecting a magnitude of an angle of the second object image relative to an axis of the second area sensor based on the detected image intervals; and
- a distance detector for calculating an object distance based on a distance between analogous object images formed on the first and the second area sensors.

B2
cont'd

10. (Twice Amended) A distance measuring device according to claim 9, wherein said distance detector includes a distance correcter for correcting the distance between the first and second object images formed on the first and the second area sensors to a corrected distance and that calculates the object distance using the corrected distance.

DC3

11. (Twice Amended) An image sensing device comprising:
an optical system having a single optical axis for forming an object image;
a first sensor array arranged in the approximate image forming plane of the optical system for receiving light of the object image;
a second sensor array arranged in the approximate image forming plane of the optical system for receiving light of the object image;
a signal reader for reading a first photoreception signal series from said first sensor array and a second photoreception signal series from said second sensor array;
a position detector for detecting an image interval based upon the second photoreception signal series and the first photoreception signal series; and
an angle detector for detecting a magnitude of an angle of the object image relative to an axis of one of said sensor arrays based on the detected image interval.

12. (Twice Amended) An image sensing device according to claim 11, wherein said angle detector detects the angle of the object image relative to the axis of one

B2
Conceded

of said sensor arrays by means of data of relative positional relationship of said sensor arrays in said image sensing device.

b3

15. (Twice Amended) An image sensing device comprising:
an optical system for forming an object image;
an area sensor having sensing elements disposed two-dimensionally arranged in the approximate image forming plane of the optical system for receiving the light of the object image;
a signal reader for reading a first photoreception signal group from said area sensor and a second photoreception signal group from said area sensor;
a position detector for detecting an image interval based upon the second photoreception signal group and the first photoreception signal group; and
an angle detector for detecting a magnitude of an angle of the object image relative to an axis of said area sensor based on the detected image interval.

16. (Twice Amended) An image sensing device according to claim 15,
wherein said angle detector detects the angle of the object image relative to the axis of said area sensor by means of data of relative positional relationship of the detected position and said area sensor in said image sensing device.

b4
--18. (New) An image sensing device according to claim 11, wherein the image interval is determined by calculating a correlation coefficient of a luminance distribution output from the first and second sensor arrays.--